1927

Iowa Corn Yield Test, Results of the 1927 Tests

Joe L. Robinson

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IOWA
CORN YIELD TEST

RESULTS OF 1927 TESTS

By Joe L. Robinson and A. A. Bryan

The Iowa State Corn Yield test is conducted by the Iowa Corn and Small Grain Growers' Association in co-operation with the Farm Crops Section, Iowa Agricultural Experiment Station and the Office of Cereal Crops and Diseases, Bureau of Plant Industry, United States Department of Agriculture.

Only a few entries had exceptionally poor germinating seed. Cutworm damage and wet weather were causes of a uniformly rather low percentage stand in some of the fields.

Maturity

The statement has been made that a strain might be so late maturing as to be wholly undesirable and yet in a test of this nature, give a relatively high yield. Reference to Table III shows that the criticism is not well founded for 1927. The mean yields of the upper, middle and lower yielding third of the entries in each class, together with the mean percentage of moisture at harvest are shown. The highest yielding third in the open-pollinated class had the lowest moisture content at harvest while the lowest yielding third had the highest moisture content in every district. The same was true for the hybrid class in districts 1, 3, 4, 5, 8, 11, and 12. In only one district, No. 10, was

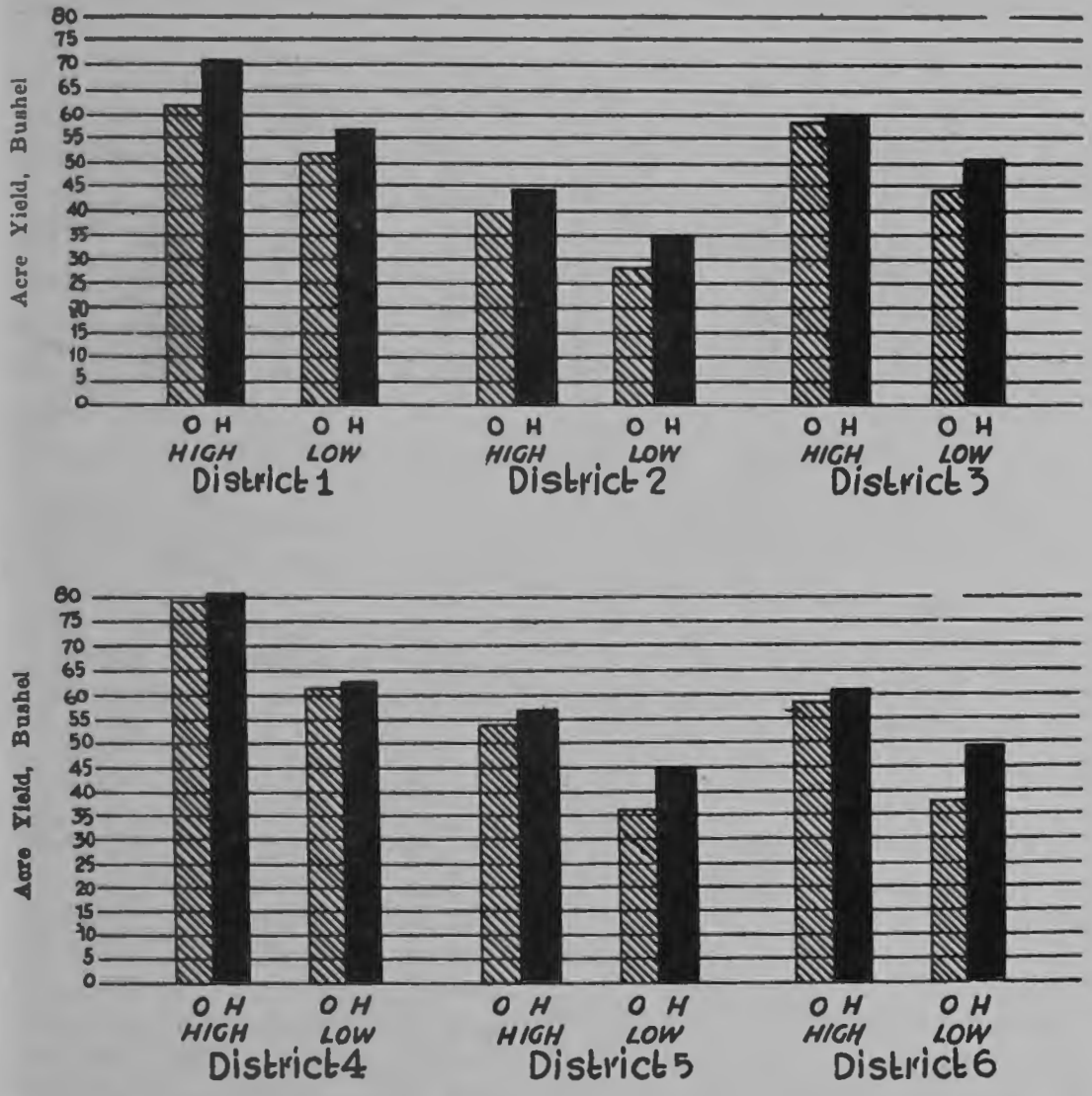

Fig. 4. Graphic comparison of the average of the two highest yielding and the two lowest yielding entries of each class, open-pollinated, O, and hybrid, H, in districts 1 to 6.

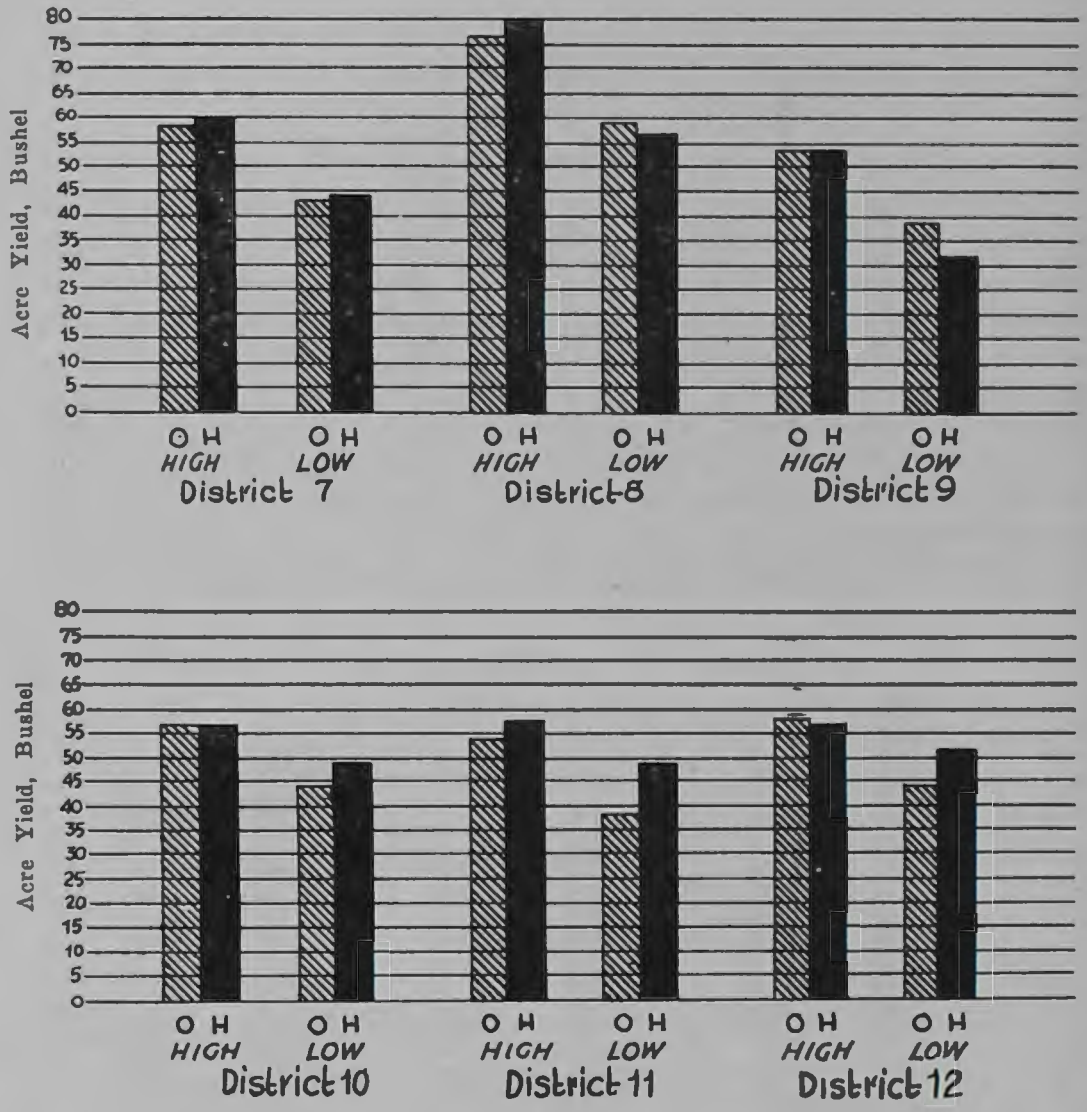

Fig. 5. Graphic comparison of the average of the two highest yielding and the two lowest yielding entries of each class, open-pollinated, O, and hybrid, H, in districts 7 to 12.

the moisture content of the highest yielding third greater than that of the lowest yielding third. As this is in agreement with the results obtained in 1926, it would seem that the earlier strains in general were the higher yielding in 1926 and 1927.

Weight of Ear

The number of ears in 100 pounds of corn with 15 per cent moisture was calculated for each strain. The mean number of ears in 100 pounds for the highest, middle and lowest yielding third of the entries in each class and each district is shown in Table III. Other things being equal the larger the ear the greater the yield but differences in weight of ear may be balanced by differences in stand or a tendency for smaller ears to be produced in greater numbers for a given number of plants. There seems to be no very close relationship between weight of ear and yield in these comparisons.

YIELDS OF SOUND SHELLED CORN

The yields shown in this publication are based on sound, shelled grain of uniform moisture content. Those ears which were spoiled and unfit for feeding were discarded.

Top Third Made Public

At the time the corn yield test was inaugurated it was agreed that only the names of those whose corn stood in the top one-third in point of yield would be made public. This policy has been followed each year. The number of each entry not ranking in the upper third, however, is made known to the individual making that entry so that comparison with other samples may be made. Table IV shows the results obtained in each district. The names of the entrants are given for only the top one-third in point of yield.

TABLE III. COMPARISON OF THE MEANS OF UPPER, MIDDLE AND LOWER YIELDING THIRD OF ENTRIES IN EACH CLASS AS TO YIELD, PERCENT OF MOISTURE AT HARVEST, AND NUMBER OF EARS PER HUNDRED POUNDS

	Yield, Bu.			Percent of Moisture at Harvest			No. Ears Per Cwt.		
District	Upper	Middle	Lower	Upper	Middle	Lower	Upper	Middle	Lower
				Open-pollinated Class					
1	60.89	57.72	53.26	24.7	27.1	27.4	302	294	287
2	37.66	34.56	30.90	29.1	34.4	36.8	380	409	461
3	56.70	51.04	46.09	30.3	32.6	36.6	300	302	309
4	74.80	69.58	65.61	27.8	28.7	30.9	195	208	202
5	50.82	46.80	41.10	26.5	26.7	33.6	244	252	276
6	55.43	48.87	43.81	37.0	41.2	46.6	217	221	232
7	54.62	50.93	46.13	26.3	28.2	30.5	229	225	236
8	73.58	68.03	63.75	17.7	19.3	19.3	192	191	188
9	50.95	47.24	42.03	35.6	39.5	42.0	253	254	274
10	53.80	51.10	46.04	23.2	23.7	25.6	190	190	199
11	51.30	47.84	42.69	37.1	37.4	38.3	229	233	224
12	54.93	52.27	45.63	29.2	30.2	34.0	222	226	240
				Hybrid Class					
1	68.67	64.10	59.69	23.7	27.0	27.2	304	277	303
2	43.91	40.17	34.77	33.1	32.8	38.7	402	396	384
3	59.82	56.53	50.61	33.3	36.3	40.5	297	315	325
4	78.12	70.96	66.26	30.8	31.7	34.7	195	195	201
5	56.68	52.67	45.71	26.0	29.5	33.1	277	254	258
6	60.94	51.91	49.15	40.5	43.8	42.9	245	237	249
7	56.27	52.57	48.43	27.2	29.5	29.1	212	222	216
8	75.47	69.76	62.44	18.1	19.0	20.8	189	182	211
9	50.98	45.65	37.21	40.2	40.1	41.6	253	265	281
10	57.34	50.42	48.01	21.3	22.0	21.0	192	235	211
11	57.15	51.98	48.17	34.3	34.6	35.3	244	221	267
12	56.79	54.78	47.34	28.2	29.1	33.1	231	237	253

TABLE IV. RANK, ACRE YIELD OF MOLD-FREE SHELLED CORN CONTAINING 15 PER CENT OF MOISTURE IN BUSHELS AND AS A PERCENTAGE OF THE AVERAGE OF ALL ENTRIES, AND PERCENT OF MOISTURE AT HARVEST, FOR ENTRIES IN EACH DISTRICT

District Number One

Open-pollinated Class

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
1	108	62.65	109.4	25.1	Geo. M. Allee, Newell, Buena Vista, B. & J.
2	A101	62.16	108.5	28.2	Geo. M. Allee, Newell, Buena Vista, F. & J.
3	109	61.74	107.8	25.9	Geo. M. Allee, Newell, Buena Vista, J. & R.
4	102	60.20	105.1	24.8	J. S. Shannon, Estherville, Emmet, Reid's Reliance
5	L130	60.20	105.1	22.3	Wm. McArthur, Mason City, Cerro Gordo, Early Gold
6	106	59.92	104.6	25.5	John Heuck, Everly, Clay, Kossuth Reliance
7	K129	59.36	103.6	21.0	Wm. McArthur, Mason City, Cerro Gordo, Golden King
8	127	58.80	102.6	28.4	
9	C107	58 52	102.1	26.4	
10	111	58.24	101.7	25.4	
11	124	58.17	101.5	30.4	
12	110	58.03	101.3	25.3	
13	131	57.26	99.9	24.9	
14	B105	55.02	96.0	29.2	
15	E113	54 74	95.5	28.4	
16	132	54.18	94.6	25.4	
17	122	53.69	93.7	27.6	

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.
18	123	53.13	92.7	27.5	20	104	52 85	92.2	28.8
19	103	52.99	92.5	30.0	21	120	51.24	89.4	24.3

Hybrid Class

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
1	125	74.48	116.1	22.7	H. H. Turner & Wallace, Glidden, Carroll, Hi-Bred T 6
2	H118	67.41	105.1	23.1	Miller & Wallace, Waverly, Bremer, Hi-Bred Mi 3
3	126	67.06	104.5	22.5	H. H. Turner & Wallace, Glidden, Carroll, Hi-Bred T 4
4	115	65.73	102.4	26.4	Smith & Wallace, Granville, O'Brien, Hi-Bred S 4
5	J121	64.89	101.1	30.3	
6	D112	64.19	100.0	25.7	
7	G117	63.21	98.5	25.1	
8	F116	62.86	98.0	26.0	
9	114	62.16	96.9	25.9	
10	I119	59.78	93.2	24.9	
11	128	53.97	84.1	31.8	

District Number Two

Open-pollinated Class

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
1	206	39.69	115.5	29.6	Royal Jacobs, Rudd, Floyd, Bloody Butcher.
2	221	38.67	112.5	29.2	R. H. Holt, Clear Lake, Cerro Gordo, Golden King
3	L236	37.91	110.3	25.3	Wm. McArthur, Mason City, Cerro Gordo, Early Gold
4	201	37.02	107.7	31.4	Chas. C. Nichol, Osage, Mitchell, Not known (white)
5	205	36.83	107.2	33.4	Royal Jacobs, Rudd, Floyd, Yellow Dent
6	K233	36.70	106.8	27.6	Wm. McArthur, Mason City, Cerro Gordo, Golden King
7	A202	36.70	106.8	33.8	Geo. M. Allee, Newell, Buena Vista, F. & J.
8	225	35.37	102.9	34.6	
9	E214	35.12	102.2	34.4	
10	204	34.61	100.7	33.9	
11	220	34.61	100.7	32.9	
12	207	34.48	100.3	31.1	
13	223	34.48	100.3	42.8	
14	212	34.04	99.0	32.2	
15	203	32.58	94.8	30.4	
16	209	31.88	92.8	37.2	

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.
17	B210	31.81	92.6	35.7	20	222	30.24	88 0	41.4
18	228	31.56	91.8	37.4	21	224	29.16	84.8	40.4
19	C211	30.48	88.7	37.7	22	208	26.61	77.4	34.9

Hybrid Class

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
1	H217	44.83	112.9	31.7	Miller & Wallace, Waverly, Bremer, Hi-Bred Mi 3
2	D213	42.99	108.3	34.5	Smith & Wallace, Granville, O'Brien, Hi-Bred S 1
3	I218	41.66	104.9	31.6	
4	G216	40.70	102.5	32.8	
5	F215	38.16	96.1	34.1	
6	J219	36.77	92.6	44.6	
7	237	32.77	82.5	32.7	

District Number Three

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
					Open-pollinated Class
1	K317	59.57	116.2	28.1	Wm. McArthur, Mason City, Cerro Gordo, Golden King
2	E307	56.35	109 9	31.7	S. N. Smith, Granville, O'Brien, Ioleaming
3	L318	55.86	109.0	28.5	Wm. McArthur, Mason City, Cerro Gordo, Early Gold
4	A301	55.02	107.3	32.9	Geo. M. Allee, Newell, Buena Vista, F. & J.
5	302	54.04	105.4	26.7	
6	319	52.92	103.2	33.7	
7	B303	50.19	97.9	35.7	
8	305	49.84	97.2	33.0	
9	313	48.23	94.1	33.8	
10	316	48.02	93.7	34.6	
11	C304	47.60	92.9	37.2	
12	315	44.38	86.6	40.0	
13	314	44.37	86.6	34.5	
					Hybrid Class
1	I311	60.62	108.9	33 2	Miller & Wallace, Waverly, Bremer, Hi-Bred Mi 4
2	H310	59.01	106.0	33.3	Miller & Wallace, Waverly, Bremer, Hi-Bred Mi 3
3	D306	56 98	102.4	37.4	
4	G309	56.07	100.8	35.1	
5	J312	51.03	91.7	43.5	
6	F308	50.19	90.2	37.4	

District Number Four

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
					Open-pollinated Class
1	C403	79.87	114.1	29.0	Geo. M. Allee, Newell, Buena Vista, A. & J.
2	E405	77.35	110.5	24.3	Geo. M. Allee, Newell, Buena Vista, J. & R.
3	D404	77.21	110.3	23.8	Geo. M. Allee, Newell, Buena Vista, B. & J.
4	419	75.74	108.2	26.9	A. J. Polking, Breda, Carroll, Yellow Dent
5	406	74.76	106.8	27.5	Geo. M. Allee, Newell, Buena Vista, W. R. 49
6	442	74.41	106.3	31.0	Ronald M. Wilson, Sac City, Sac, Iodent
7	421	73.08	104.4	33.0	Lester Pfister, El Paso, Ill., Woodford, Krug
8	411	72.31	103.3	27.3	Fred N. Rupp, Cherokee, Cherokee, R. & K.
9	424	71.82	102.6	26.3	L. P. Lund, Newell, Buena Vista, Lund Variety
10	443	71.47	102.1	29.0	Ronald M. Wilson, Sac City, Sac, Iowa Pride
11	417	71.19	101.7	25.9	
12	423	70.91	101.3	24.3	
13	M436	70.91	101.3	25.8	
14	429	70.14	100.2	27.0	
15	I432	69.79	99.7	28.9	
16	431	69.65	99.5	31.9	
17	426	68.88	98.4	31.2	
18	422	68.81	98.3	31.0	
19	K434	68.67	98.1	29.6	
20	427	68.53	97.9	29.5	
21	428	67.90	97.0	30.7	
22	420	67.90	97,0	26.8	
23	430	67.83	96.9	22.7	

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.
24	G418	67.83	96.9	30.1	28	R441	65.80	94.0	36.2
25	J433	67.41	96.3	34.8	29	410	65.36	93.4	32.1
26	408	66.64	95.2	33.7	30	L435	63.70	91.0	27.5
27	409	66.29	94.7	30.5	31	A401	57.33	81.9	35.0

					Hybrid Class
1	B402	87.50	121.9	28.6	Baker & Wallace, Beaconsfield, Ringgold, Hi-Bred B 2
2	415	75.46	105.1	32.3	Genetics Section, Ames, Story, Sample No. 4
3	413	75.11	104.6	32.6	Genetics Section, Ames, Story, Sample No. 2
4	Q440	74.41	103.7	29.5	Newlin & Wallace, Grimes, Polk, Hi-Bred N 1
5	H425	71.61	99.8	32.1	
6	O438	71.33	99.4	30.8	
7	F407	70.56	98.3	27.3	
8	412	70.35	98.0	36.5	
9	414	70.28	97.9	38.5	
10	N437	69.23	96.4	28.1	
11	P439	64.89	90.4	34.7	
12	416	60.62	84.5	37.3	

District Number Five

Open-pollinated Class

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
1	522	54.53	117.9	26.1	Four Co. Agr. Imp. Assoc., Ackley, Hardin, Four Co. White
2	D505	53.18	114.9	24.0	Geo. M. Allee, Newell, Buena Vista, B. & J.
3	E506	53.13	114.9	25.7	Geo. M. Allee, Newell, Buena Vista, J. & R.
4	528	51.59	111.5	28.6	T. A. Chantland, Badger, Webster, Imp. Yel. Dent
5	M527	50.33	108.8	24.7	Smith Bros., Center Junction, Jones, Ioleaming
6	518	50.26	108.6	27.4	Day Bros., Gilmore City, Humboldt, Osterland's Y. D.
7	521	49.42	106.8	26.7	H. A. Flett, Dows, Wright, Reid's Y. D.
8	508	48.72	105.3	27.4	Geo. M. Allee, Newell, Buena Vista, J 14 & W R 49
9	519	48.58	105.0	27.5	H. J. Van Hauen, Shell Rock, Butler, Dewey's White Dent
10	507	48.23	104.3	28.7	
11	G516	48.02	103.8	29.1	
12	L526	47.60	102.9	25.8	
13	K525	47.60	102.9	29.5	
14	I523	47.32	102.3	26.8	
15	541	47.18	102.0	25.6	
16	515	46.76	101.1	27.3	
17	C504	46.62	100.8	32.2	
18	514	46.48	100.5	22.7	
19	512	45.08	97.4	23.5	
20	513	43.75	94.6	28.1	

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.
21	J524	43.54	94.1	32.7	24	517	40.74	88.1	31.4
22	510	43.18	93.3	28.0	25	R536	40.67	87.9	38.6
23	511	41.02	88.7	32.5	26	A501	30.92	66.8	38.9

Hybrid Class

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
1	533	58.31	112.8	18.8	Miller & Wallace, Waverly, Bremer, Hi-Bred Mi 3
2	Q532	56.56	109.4	27.8	Newlin & Wallace, Grimes, Polk, Hi-Bred N 1
3	B502	55.16	106.7	31.5	Baker & Wallace, Beaconsfield, Ringgold, Hi-Bred B 2
4	O530	53.79	104.1	30.6	
5	N529	53.27	103.1	26.6	
6	H520	50.96	98.6	31.3	
7	F509	48.09	93.0	27.3	
8	503	47.04	91.0	36.7	
9	P531	42.00	81.3	35.4	

District Number Six

Open-pollinated Class

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
1	M617	58.10	117.6	36.3	Smith Bros., Center Junction, Jones, Ioleaming
2	618	57.79	117.0	34.9	R. L. Sutter, Aurora, Buchanan, Not known
3	E605	57.59	116.6	35.9	Geo. M. Allee, Newell, Buena Vista, J. & R.
4	611	53.28	107.9	38.6	Refle Bros., Elkport, Clayton, Refle's Utility
5	C603	53.09	107.5	38.8	Geo. M. Allee, Newell, Buena Vista, A. & J.
6	D604	52.71	106.7	37.2	Geo. M. Allee, Newell, Buena Vista, B. & J.
7	619	50.04	101.3	37.2	
8	608	49.53	100.3	37.7	
9	R624	49.28	99.8	46.8	
10	610	47.88	96.9	42.0	
11	L616	47.63	96.4	42.2	
12	K615	47.12	95.4	47.1	
13	J614	46.86	94.9	49.1	
14	G609	46.74	94.6	43.4	
15	I613	46.10	93.3	43.8	
16	606	42.67	86.4	49.2	
17	A601	33.34	67.5	46.7	

Hybrid Class

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
1	B602	61.15	113.9	40.8	Baker & Wallace, Beaconsfield, Ringgold, H.-Bred B. 2
2	Q623	60.72	113.1	40.1	Newlin & Wallace, Grimes, Polk, Hi-Bred N 1
3	N620	54.99	102.4	38.3	
4	H612	51.50	95.9	49.6	
5	P622	49.23	91.7	43.6	
6	O621	49.21	91.6	40.7	
7	F607	49.09	91.4	45.0	

District Number Seven

Open-pollinated Class

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
1	L718	59.88	118.5	24.5	G. V. Harkrader, Adel, Dallas, Harkrader Y. D.
2	K716	56.32	111.4	25.6	Frank Trucks, Coon Rapids, Carroll, Krug
3	H710	55.69	110.2	26.8	Henry Bordeaux, Adel, Dallas, Bordeaux Y. D.
4	720	55.12	109.0	21.1	Jos. Lengeling, Breda, Carroll, Yel. Dent
5	I711	54.48	107.8	28.6	Lester Pfister, El Paso, Ill., Woodford, Pfister's Krug
6	Q726	53.98	106.8	26.9	A. Wilson, Harlan, Shelby, Wilson's High Y. Y. D.
7	719	53.61	106.1	24.7	J. J. Feld, Carroll, Carroll, Reid's Y. D.
8	P725	53.40	105.6	29.6	Fred McCulloch, Hartwick, Iowa, McCulloch High Yield
9	R729	53.34	105.5	24.7	McNeilly & Smith, Center Junction, Jones, Ioleaming
10	M721	53.15	105.1	27.3	Clarence S. Hill, Minburn, Dallas, Black's Y. D.
11	777	52.71	104.3	23.0	
12	O724	52.64	104.1	31.2	
13	723	52.13	103.1	29.0	
14	717	51.05	101.0	24.5	
15	708	50.29	99.5	32.5	
16	J713	50.28	99.4	30.0	
17	715	48.77	96.5	28.9	
18	714	48.51	96.0	27.7	
19	G709	48.32	95.6	29.7	
20	706	47.88	94.7	28.8	
21	A701	47.56	94.1	32.3	
22	Z772	47.18	93.3	32.5	

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.
23	769	46.55	92.1	31.1	27	712	45.28	89.6	27.7
24	727	46.42	91.8	29.2	28	730	44.89	88.8	31.8
25	780	46.36	91.7	30.1	29	F707	44.64	88.3	29.0
26	731	45.40	89.8	30.4	30	AA781	40.70	80.5	36.1

Hybrid Class

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
1	B702	59.88	114.2	25.8	Baker & Wallace, Beaconsfield, Ringgold, Hi-Bred B 1
2	757	59.82	114.1	27.6	Casady & Wallace, Des Moines, Polk, Hi-Bred C W 28
3	767	58.93	112.4	27.6	Casady & Wallace, Des Moines, Polk, Hi-Bred C W 49
4	N722	58.29	111.2	31.0	Cereal Crops & Diseases, U. S. D. A., Ames, Story, U. S. D. A. No. 3
5	759	57.09	108.9	25.1	Casady & Wallace, Des Moines, Polk, Hi-Bred C W 34
6	751	55.94	106.7	28.8	Casady & Wallace, Des Moines, Polk, Hi-Bred C W 18
7	765	55.56	106.0	27.1	Casady & Wallace, Des Moines, Polk, Hi-Bred C W 45
8	755	55.56	106.0	26.4	Casady & Wallace, Des Moines, Polk, Hi-Bred C W 25
9	728	54.86	104.6	26.7	Turner & Wallace, Glidden, Carroll, Hi-Bred T 2
10	E705	54.86	104.6	26.0	Morse & Wallace, Marengo, Iowa, Hi-Bred M 10
11	750	54.61	104.2	28.7	Casady & Wallace, Des Moines, Polk, Hi-Bred C W 14
12	746	54.48	103.9	29.1	Casady & Wallace, Des Moines, Polk, Hi-Bred C W 7
13	760	54.04	103.1	25.2	Casady & Wallace, Des Moines, Polk, Hi-Bred C W 35
14	768	53.85	102.7	25.3	Casady & Wallace, Des Moines, Polk, Hi-Bred C W 52
15	U739	53.78	102.6	25.3	
16	748	53.78	102.6	31.6	
17	761	53.66	102.3	32.8	
18	763	53.59	102.2	28.3	
19	766	53.47	102.0	30.6	
20	762	53.21	101.5	34.4	
21	749	52.96	101.0	27.8	
22	764	52.39	99.9	30.5	
23	747	52.13	99.4	30.3	
24	753	52.07	99.3	30.7	
25	Y743	52.01	99.2	29.2	

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.
26	D704	51.88	99.0	28.0	35	744	49.53	94.5	29.8
27	C703	51.56	98.3	27.1	36	754	49.53	94.5	25.5
28	T738	51.24	97.7	26.3	37	735	49.28	94.0	28.8
29	V740	50.86	97.0	29.1	38	734	48.90	93.3	30.6
30	S732	50.61	96.5	31.0	39	737	48.51	92.5	32.0
31	752	49.85	95.1	27.3	40	745	48.07	91.7	26.1
32	X742	49.78	94.9	27.6	41	736	47.50	90.6	30.4
33	W741	49.72	94.8	30.8	42	756	45.28	86.4	29.4
34	733	49.72	94.8	30.6	43	758	41.72	79.6	27.3

District Number Eight

Open-pollinated Class

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
1	8105	77.56	118.3	17.2	E. W. Sanders, Ames, Story, ...
2	8101	77.32	112.9	17.2	Henry Birkeland, Nevada, Story, Reid's Y. D.
3	R840	76.93	112.4	14.8	McNeilly & Smith, Center Jct., Jones, Ioleaming
4	8106	75.88	110.8	17.5	Geo. Banks, Ames, Story, ...
5	I822	74.69	109.1	18.8	Lester Pfister, El Paso, Ill., Woodford, Pfister's Krug
6	8102	74.62	109.0	19.1	C. E. Norman, Zearing, Story, Reid's Y. D.
7	8103	74.13	108.3	17.9	H. B. Thompson, Kelley, Story, Reid's Y. D.
8	8104	72.94	106.5	18.3	J. H. Johnson & Son, Story City, Story, Reid's Y. D.
9	8112	72.80	106.3	18.0	L. O. McCall, Ogden, Boone, Yel. Dent
10	L825	72.66	106.1	19.6	G. V. Harkrader, Adel, Dallas, Harkrader Y. D.
11	842	72.17	105.4	18.2	S. Fleming, Stuart, Adair, Fleming Y. D.
12	K824	70.00	102.2	17.5	Frank Trucks, Coon Rapids, Carroll, Krug
13	M826	69.37	101.3	19.2	Clarence S. Hill, Minburn, Dallas, Black's Y. D.
14	818	69.09	100.9	15.1	A. A. Miller, Ogden, Boone, Lemon Yellow
15	8109	68.88	100.6	19.4	
16	816	68.74	100.4	20.4	
17	F817	68.74	100.4	17.9	
18	H821	68.60	100.2	18.6	
19	828	68.53	100.1	20.2	
20	838	68.46	100.0	19.8	
21	Q837	68.32	99.8	17.1	
22	839	67.97	99.3	18.6	
23	8107	67.83	99.1	17.6	
24	841	67.76	99.0	20.7	
25	8108	67.69	98.9	18.8	
26	AA8113	67.41	98.5	21.3	
27	O835	66.99	97.9	19.6	
28	P836	66.50	97.1	20.4	
29	843	66.43	97.0	18.2	

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.
30	827	66.29	96.8	22.8	37	834	63.98	93.5	20.4
31	819	65.66	95.9	19.1	38	845	63.28	92.4	16.6
32	Z8111	65.66	95.9	20.8	39	G820	62.09	90.7	18.9
33	832	65.30	95.5	19.4	40	833	61.53	89.9	18.3
34	829	65.10	95.1	20.7	41	A801	60.13	87.8	21.4
35	8110	64.75	94.6	18.9	42	831	58.03	84.8	15.6
36	J823	64.33	94.0	18.8					

Hybrid Class

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
1	B805	82.32	118.9	16.9	Baker & Wallace, Beaconsfield, Ringgold, Hi-Bred B 1
2	D812	77.63	112.1	17.8	Morse & Wallace, Marengo, Iowa, Hi-Bred M 8
3	879	77.56	112.0	14.8	Skromme & Wallace, Roland, Story, Hi-Bred Sk 10
4	873	77.14	111.4	18.3	Skromme & Wallace, Roland, Story, Hi-Bred Sk 4
5	809	77.00	111.2	18.8	Morse & Wallace, Marengo, Iowa, Hi-Bred M 4
6	E814	76.72	110.8	15.8	Morse & Wallace, Marengo, Iowa, Hi-Bred M 10
7	815	76.44	110.4	19.6	Morse & Wallace, Marengo, Iowa, Hi-Bred M 12
8	844	76.02	109.8	15.9	Wallace & Reece, Ames, Story, Imp. Calico 26 X Y
9	874	76.02	109.8	19.2	Skromme & Wallace, Roland, Story, Hi-Bred Sk 5
10	894	75.67	109.3	16.1	Skromme & Wallace, Roland, Story, Hi-Bred Sk 26
11	898	75.46	109.0	19.5	Skromme & Wallace, Roland, Story, Hi-Bred Sk 30
12	880	75.04	108.4	20.1	Skromme & Wallace, Roland, Story, Hi-Bred Sk 11
13	888	74.90	108.2	18.4	Skromme & Wallace, Roland, Story, Hi-Bred Sk 20
14	878	74.76	108.0	18.9	Skromme & Wallace, Roland, Story, Hi-Bred Sk 9
15	813	74.62	107.8	19.0	Morse & Wallace, Marengo, Iowa, Hi-Bred M 9
16	864	74.62	107.8	20.6	Waukee Voc. Ag. Class, Waukee, Dallas, Hi-Bred Waukee 11
17	899	74.27	107.3	19.4	Skromme & Wallace, Roland, Story, Hi-Bred Sk 31
18	8100	74.20	107.2	18.8	Skromme & Wallace, Roland, Story, Hi-Bred Sk 32
19	868	74.06	107.0	19.7	Skromme & Wallace, Roland, Story, Hi-Bred Sk 19
20	808	74.06	107.0	18.7	Morse & Wallace, Marengo, Iowa, Hi-Bred M 3
21	893	73.85	106.7	19.5	Skromme & Wallace, Roland, Story, Hi-Bred Sk 25
22	884	73.85	106.7	17.1	Skromme & Wallace, Roland, Story, Hi-Bred Sk 15
23	892	72.73	105.1	15.3	Skromme & Wallace, Roland, Story, Hi-Bred Sk 24
24	811	72.45	104.7	17.0	Morse & Wallace, Marengo, Iowa, Hi-Bred M 7
25	807	72.03	104.1	17.6	
26	897	71.68	103.6	16.2	
27	886	71.68	103.6	16.8	
28	C810	71.61	103.5	17.2	
29	869	71.26	102.9	19.5	
30	806	70.91	102.4	20.8	
31	802	70.84	102.3	19.5	
32	877	70.84	102.3	19.6	
33	871	70.14	101.3	22.1	
34	866	69.65	100.6	19.8	
35	867	69.58	100.5	20.8	
36	N830	69.58	100.5	19.4	
37	863	69.58	100.5	18.1	
38	895	69.51	100.4	17.7	
39	875	69.09	99.8	18.4	
40	889	69.09	99.8	19.3	
41	896	68.88	99.5	14.6	

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.
42	876	68.67	99.2	19.4	57	803	63.93	92.4	19.5
43	804	68.19	98.5	20.8	58	849	63.14	91.2	22.0
44	883	68.11	98.4	19.6	59	848	62.58	90.4	22.5
45	870	67.97	98.2	20.8	60	885	61.32	88.6	19.3
46	890	67.90	98.1	17.1	61	847	60.97	88.1	20.7
47	851	67.76	97.9	21.4	62	891	60.83	87.9	19.8
48	850	67.62	97.7	21.5	63	861	60.62	87.6	16.9
49	862	67.55	97.6	18.5	64	846	60.55	87.5	21.4
50	887	66.50	96.1	21.1	65	V857	59.36	85.8	21.8
51	872	66.50	96.1	21.5	66	X859	59.36	85.8	24.5
52	882	66.22	95.7	19.3	67	W858	59.08	85.4	19.2
53	S854	65.80	95.1	20.4	68	853	59.08	85.4	20.3
54	865	65.38	94.5	20.9	69	U856	58.73	84.8	18.8
55	T855	65.17	94.1	20.6	70	881	56.98	82.3	20.5
56	852	64.54	93.2	23.4	71	Y860	56.77	82.0	25.0

District Number Nine

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
					Open-pollinated Class
1	909	54.26	116.1	31.4	E. F. Burr, Monticello, Jones, Ioleaming
2	I915	52.90	113.2	40.5	Lester Pfister, El Paso, Ill., Woodford, Pfister's Krug
3	921	52.01	111.3	33.6	Burt H. Neal, Mt. Vernon, Linn, Reid's Y. D.
4	931	51.18	109.5	32.4	Paul N. Smith, Center Jct., Jones, Ia. 119
5	Q928	50.28	107.5	39.2	A. Wilson, Harlan, Shelby, Wilson's High Yield Y. D.
6	922	50.17	107.4	42.0	Woodford Co. Ag. Assoc., Eureka, Ill., Woodford, Orig. Krug
7	905	49.85	106.7	36.5	Geo. M. Allee, Newell, Buena Vista, W R 49
8	R929	49 85	106.7	31.7	McNeilly & Smith, Center Jct., Jones, Ioleaming
9	920	49.85	106.7	31.7	H. E. Wilkinson, DeWitt, Clinton, Ioleaming
10	923	49.21	105.3	36.6	W. F. Hintz & Son, Monticello, Jones, Spruceville Dent
11	M919	48.64	104.1	37.7	
12	F910	48.39	103.6	36.7	
13	L918	47.88	102.5	38 9	
14	O926	47.43	101.5	44.1	
15	904	47.17	101.0	33.0	
16	930	47.12	100.9	38.6	
17	H914	47.05	100.7	40.6	
18	P927	46.36	99.2	43.8	
19	924	45.09	96.5	41.7	
20	G913	44.51	95.3	39.0	
21	J916	44.39	95.0	44.8	

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.
22	911	44.32	94.9	43.9	26	949	41 34	88.5	41.7
23	903	44.01	94.2	38.5	27	AA951	40.20	86.0	44.9
24	K917	42.35	90.6	36.4	28	A901	39.12	83.7	43.6
25	912	41.34	88.5	38.2	29	Z950	38.74	82.9	49.2

					Hybrid Class
1	E908	53.91	120.7	37.3	Morse & Wallace, Marengo, Iowa, Hi-Bred M 10
2	C906	53.78	120.4	39 2	Morse & Wallace, Marengo, Iowa, Hi-Bred M 5
3	N925	53.21	119.1	43.7	Cereal Crops & Diseases, U. S. D. A., Ames, Story, U. S. D. A. No. 3
4	941	49.47	110.8	40.1	Casady & Wallace, Des Moines, Polk, Hi-Bred C W 101
5	D907	49.44	110.7	41.3	Morse & Wallace, Marengo, Iowa, Hi-Bred M 8
6	Y938	48.96	109.6	40.0	Casady & Wallace, Des Moines, Polk, Hi-Bred C W 4251
7	943	48 07	107 ·	40.1	Casady & Wallace, Des Moines, Polk, Hi-Bred C W 114
8	B902	48.01	107.5	43.5	
9	946	47.63	106.7	39.6	
10	945	47.50	106.4	41.2	
11	T933	46.16	103.4	41.4	
12	U934	44.39	99.4	38 8	
13	S932	44.13	98.8	41.8	

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.
14	V935	44.13	98.8	40.1	19	944	35.75	80.0	44.2
15	939	43.24	96.8	34.5	20	X937	34.48	77.2	44.8
16	W936	42.67	95.5	38.7	21	948	34.29	76.8	45 2
17	947	42.16	94.4	40.8	22	940	30.61	68.5	33.8
18	942	40.51	90.7	43.5					

District Number Ten

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
					Open-pollinated Class
1	1027	54.23	107.8	24.7	Bert A. Waltz & Sons, Shenandoah, Page, Utility Yellow
2	M1022	54.04	107.5	24.4	F. J. Haas, Shelby, Pottawattamie, Reid's Y. D.
3	G1010	53.59	106.6	25.2	Lester Pfister, El Paso, Ill., Woodford, Pfister's Krug
4	F1009	53 34	106.1	22.0	E. S. Dyas & Sons, Bellevue, Jackson, Reid's Y. D.
5	1023	53.28	105.9	19.9	Claud Wilson, Henderson, Mills, Wilson's Early Dent
6	1019	53.09	105.6	26.1	Thos. Thompson, Villisca, Montgomery, Krug
7	H1011	52.39	104.2	24.2	J. A. Renander, Essex, Page, Zeller Improved
8	1016	52.39	104.2	23.5	Fred McCulloch, Hartwick, Iowa, McCulloch High Yield
9	1018	52.13	103.7	27.9	
10	1015	52.13	103.7	22.6	
11	1017	51.94	103.3	25.9	
12	K1030	51.94	103.3	22.0	
13	B1002	51.75	102.9	24.3	
14	1013	51.31	102.0	22.1	
15	1012	51.24	101.9	24.5	
16	E1008	49 72	98.9	25.5	
17	L1021	49.53	98.5	18.8	
18	1006	48.83	97.1	24.2	

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.
19	1004	47.37	94.2	16.0	22	1035	46.52	92.5	27.0
20	A1001	46.80	93.1	26.2	23	D1005	46.36	92.2	21.4
21	1007	46.74	92.9	21.4	24	1020	43.05	85.6	28.0

					Hybrid Class
1	I1014	60.07	115.0	23.6	Cereal Crops & Diseases, U. S. D. A., Ames, Story, U. S. D. A. No. 4
2	O1025	54.61	104.6	18.9	Casady & Wallace, Des Moines, Polk, Hi-Bred C W 47
3	N1024	50.42	96.6	22.0	
4	P1026	49 21	94.2	21.9	
5	O1008	46.80	89.6	20.1	

District Number Eleven

Open-pollinated Class

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
1	1118	54.04	114.3	39.0	Jos. Hoskins, Cedar, Mahaska, Calico
2	1121	53.85	113.9	36.4	Clarence Meyer, Van Meter, Madison, Krug
3	1126	51.37	108.7	37.2	Bert A. Waltz & Sons, Shenandoah, Page, Utility Yellow
4	1105	50.86	107.6	37.9	Brenton Bros., Dallas Center, Dallas, Reid's Y. D.
5	1111	50.04	105.8	37.4	Woodford Co. Ag. Assoc., Eureka, Ill., Woodford, Orig. Krug
6	B1102	49.59	104.9	36.2	Chas. D. Kirkpatrick, Keota, Keokuk, Walden Dent
7	1114	49.34	104.4	35.7	W. A. Hollowell, Melcher, Marion, Prairie View Y. D.
8	G1109	49.15	104.0	36.3	
9	1127	49.15	104.0	38.5	
10	1120	48.26	102.1	38.9	
11	J1115	48.07	101.7	39.9	
12	1122	47.24	99.9	39.2	
13	K1116	46.55	98.5	36.5	
14	D1106	46.48	98.3	32.6	
15	H1110	46.10	97.5	43.6	
16	F1108	45.45	96.1	38.2	
17	E1107	44.43	94.0	38.9	

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.
18	1112	43.94	92.9	36.9	20	L1117	40.96	86.6	31.4
19	M1119	42.54	90.0	42.4	21	A1101	35.43	74.9	36.5

Hybrid Class

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
1	1108	57.59	109.8	34.5	Baker & Wallace, Beaconsfield, Ringgold, Hi-Bred B 4
2	N1123	56.71	108.2	34.1	Newlin & Wallace, Grimes, Polk, Hi-Bred N 1
3	I1113	53.09	101.3	34.5	
4	O1124	50.86	97.0	34.6	
5	P1125	49.02	93.5	36.6	
6	C1105	47.31	90.2	34.0	

District Number Twelve

Open-pollinated Class

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
1	B1202	59.12	116.2	26.7	C. D. Kirkpatrick, Keota, Keokuk, Walden Dent
2	1217	56.20	110.4	29.8	Henry Co., Mt. Pleasant, Henry, Composite
3	F1208	55.94	109.9	29.7	E. S. Dyas & Sons, Bellevue, Jackson, Reid's Y. D.
4	G1209	54.72	107.5	30.6	Lester Pfister, El Paso, Ill., Woodford, Pfister's Krug
5	1211	54.17	106.4	29.1	Woodford Co. Ag. Assoc., Eureka, Ill., Woodford, Orig. Krug
6	1214	53.28	104.7	30.3	Kenneth L. Mosher, Salem, Henry, Black's Y. D.
7	1213	53.02	104.2	29.7	A. Rock Meints, Dixon, Scott, Rockfoyle Reid's
8	D1204	53.02	104.2	27.6	Geo. Steen, West Liberty, Muscatine, Steen's Y. D.
9	1222	52.96	104.1	29.5	
10	1206	52.51	103.2	32.8	
11	1207	52.41	103.0	29.2	
12	K1219	52.38	102.9	30.0	
13	E1205	52.26	102.7	32.7	
14	L1220	51.94	102.1	22.5	
15	H1210	51.44	101.1	34.5	
16	J1218	50.55	99.3	33.0	
17	1212	50.17	98.6	26.7	
18	1226	49.59	97.4	35.2	

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.
19	1215	48.70	95.7	29.9	22	1224	39.50	77.6	40.9
20	1223	44.39	87.2	36.5	23	A1201	38.61	75.9	36.9
21	M1221	43.50	85.5	32.5					

Hybrid Class

Rank	Entry	Bu. per Acre	% Ave. Yield	% Moist.	Name—Address—County—Variety
1	I1216	57.66	108.3	30.2	Cereal Crops & Diseases, U. S. D. A., Ames, Story, U. S. D. A. No. 4
2	O1229	55.92	105.1	26.2	Casady & Wallace, Des Moines, Polk, Hi-Bred C W 47
3	C1208	55.88	105.0	23.8	
4	N1228	54.29	102.0	30.0	
5	1225	54.17	101.8	33.5	
6	P1230	50.61	95.1	30.6	
7	1227	44.07	82.8	35.6	

RESULTS OF THE 1927 IOWA CORN YIELD TEST

By Joe L. Robinson[1] and A. A. Bryan[2]

The Iowa corn yield test was planned to locate the higher yielding strains of corn in the different districts of the state. The test is conducted in such a way that differences in yield are due to inherent qualities in the strains compared—not to differences in soil or treatment.

Studies have been made of the results obtained in the test each year from the standpoint of the efficiency of the methods followed. Slight changes have been made from time to time. The 1927 test, however, was conducted very much the same as that of 1926 and previous years.

Strains differing considerably in yield were again among those included in the test. This publication gives the methods followed and the results of the 1927 test somewhat in detail.

Corn Tested Locally

Since it is desirable to compare the strains under conditions to which each would ordinarily be adapted, the state was divided may be termed western, central and eastern. The divisions are

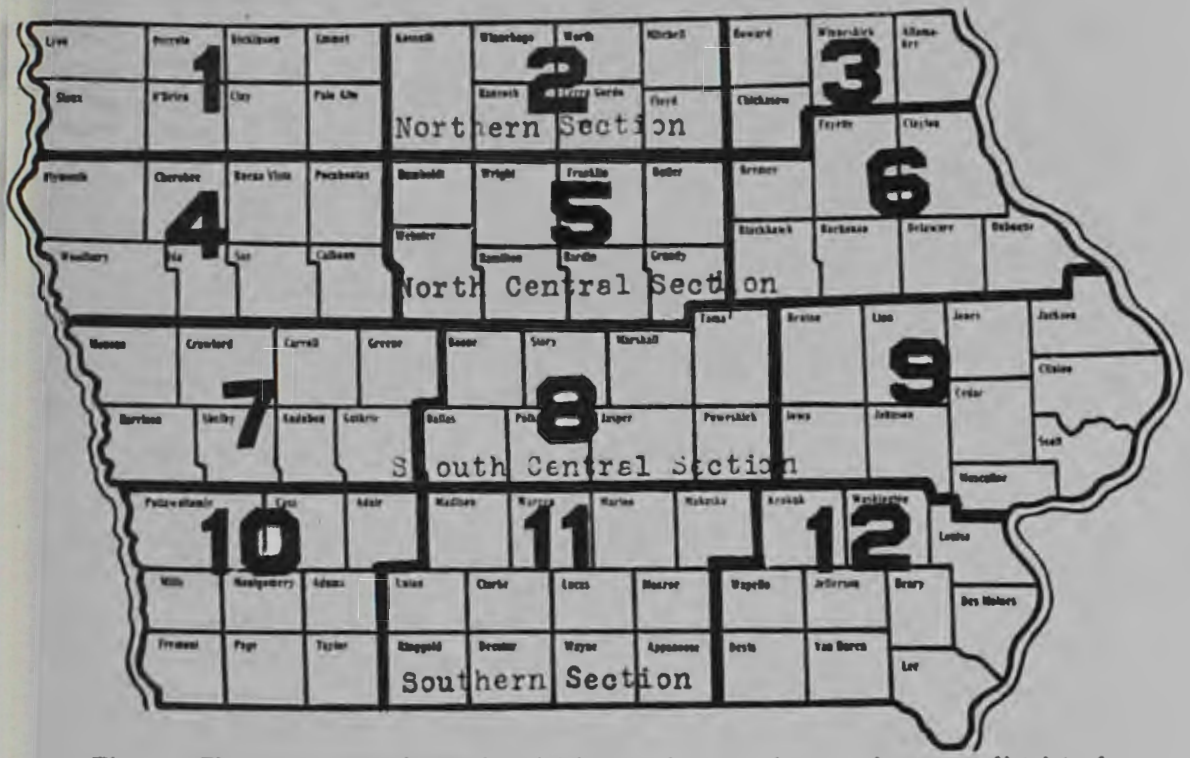

Fig. 1. The above map shows the division of the state into sections and districts for the state yield test.

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SECTION ENTRIES

TABLE V. YIELDS PRODUCED BY STRAINS WHICH WERE ENTERED IN ALL THREE DISTRICTS OF A PARTICULAR SECTION

Northern Section

Rank	Entry	Bu. per Acre	% Ave. Yield	Name—Address—County—Variety
				Open-pollinated Class
1	K	51.88	108.9	Wm. McArthur, Mason City, Cerro Gordo, Golden King
2	L	51.82	107.7+	Wm. McArthur, Mason City, Cerro Gordo, Early Gold
3	A	51.29	107.7	
4	E	48.74	102.8	
5	B	45.67	95.9	
6	C	45.58	95.6	
				Hybrid Class
1	H	57.08	107.4	Miller & Wallace, Waverly, Bremer, Hi-Bred M 3
2	D	54.72	102.9	Smith & Wallace, Granville, O'Brien, Hi-Bred S 1
3	I	54.02	101.6	
4	G	53.33	100.3	
5	J	50.90	95.7	
6	F	50.40	94.8	

North Central Section

Rank	Entry	Bu. per Acre	% Ave. Yield	Name—Address—County—Variety
				Open-pollinated Class
1	E	62.69	113.5	Geo. M. Allee, Newell, Buena Vista, J. & R.
2	D	61.02	110.5	Geo. M. Allee, Newell, Buena Vista, B. & J.
3	C	59.86	108.4	Geo. M. Allee, Newell, Buena Vista, A. & J.
4	M	59.78	108.3	Smith Bros., Center Jct., Jones, Ioleaming
5	K	54.46	98.6	
6	I	54.40	98.5	
7	G	54.20	98.2	
8	L	52.98	96.0	
9	J	52.60	95.3	
10	R	51.92	94.0	
11	A	40.58	73.4	
				Hybrid Class
1	B	67.94	115.0	Baker & Wallace, Beaconsfield, Ringgold, Hi-Bred B 2
2	Q	63.90	108.2	Newlin & Wallace, Grimes, Polk, Hi-Bred N 2
3	N	59.16	100.2	
4	O	58.11	98.4	
5	H	58.02	98.2	
6	F	55.91	94.7	
7	P	52.04	88.1	

South Central Section

Rank	Entry	Bu. per Acre	% Ave. Yield	Name—Address—County—Variety
				Open-pollinated Class
1	I	60.69	109.9	Lester Pfister, El Paso, Ill., Woodford, Pfister's Krug
2	L	60.14	108.9	G. V. Harkrader, Adel, Dallas, Harkrader Y. D.
3	R	60.04	108.7	McNeilly & Smith, Center Jct., Jones, Ioleaming
4	Q	57.51	104.1	A. Wilson, Harlan, Shelby, Wilson's High Yield Y. D.
5	H	57.11	103.4	Henry Bordeaux, Adel, Dallas, Bordeaux Y. D.
6	M	57.05	103.3	
7	K	56.22	101.8	
8	O	55.69	100.8	
9	P	55.42	100.3	
10	F	53.92	97.6	
11	J	52.98	95.9	
12	Z	50.53	91.5	
13	G	51.64	93.5	
14	AA	49.44	89.5	
15	A	48.94	88.6	
				Hybrid Class
1	B	63.40	114.4	Baker & Wallace, Beaconsfield, Ringgold, Hi-Bred B 1
2	E	61.83	111.5	Morse & Wallace, Marengo, Iowa, Hi-Bred M 10
3	N	60.36	108.9	Cereal Crops & Diseases, U. S. D. A., Ames, Story, U. S. D. A. No. 3
4	D	59.65	107.6	Morse & Wallace, Marengo, Iowa, Hi-Bred M 8
5	C	58.98	106.4	
6	T	54.19	97.7	
7	S	53.51	96.5	
8	Y	52.58	94.8	
9	U	52.30	94.3	
10	V	51.45	92.8	
11	W	50.49	91.1	
12	X	47.87	86.3	

Southern Section

Rank	Entry	Bu. per Acre	% Ave. Yield	Name—Address—County—Variety
				Open-pollinated Class
1	B	53.49	108.1	C. D. Kirkpatrick, Keota, Keokuk, Walden Dent
2	G	52.49	106.1	Lester Pfister, El Paso, Ill., Woodford, Pfister's Krug
3	F	51.58	104.2	E. S. Dyas & Sons, Bellevue, Jackson, Reid's Y. D.
4	J	50.34	101.7	Fred McCulloch, Hartwick, Iowa, McCulloch High Yield
5	K	50.29	101.6	
6	H	49.98	101.0	
7	E	48.80	98.6	
8	D	48.62	98.2	
9	L	47.48	95.9	
10	M	46.69	94.3	
11	A	40.28	81.4	
				Hybrid Class
1	I	56.94	108.2	Cereal Crops & Diseases, U. S. D. A., Ames, Story, U. S. D. A. No. 4
2	N	53.81	102.2	Newlin & Wallace, Grimes, Polk, Hi-Bred N 1
3	O	53.80	102.2	
4	C	50.00	95.0	
5	P	49.61	94.3	

Section Yields of Previous Years

Relatively few strains have been entered in all three districts of a section for a very long period of years. If a strain showed up well for one or two years, the grower often considered it sufficient evidence that it would not be profitable to change to another strain. A strain which gave a low yield the first year it was entered in the test too frequently was not entered again.

The per cent of the average yield of those with which it was compared was used as an index of the relative performance of a strain. These indexes were averaged for the period of years during which the strain was entered. This gives a comparison between all strains which have been entered the same number of years although they may not be the same individual years. In Table VI the names of the top one-third for each period of years are given .

TABLE VI. NAMES OF THE GROWERS OF THE HIGHEST YIELDING THIRD OF THE ENTRIES IN EACH SECTION FOR THE PERIOD OF YEARS INDICATED

Name	Address	County	Kind of Corn	Percent of Ave.
EIGHT YEARS 1920—1927				
Northern Section				
No Entries				
North Central Section				
H. F. Osterland	Faulkner	Franklin	Osterland's Y. D.	102.1
South Central Section				
Geo. Steen	West Liberty	Muscatine	Steen's Y. D.	103.7
Southern Section				
C. D. Kirkpatrick	Keota	Keokuk	Walden Dent	103.7
SEVEN YEARS 1921—1927				
Northern Section				
No Entries				
North Central Section				
H. F. Osterland	Faulkner	Franklin	Osterland's Y. D.	102.1
Farm Crops Section	Ames	Story	Iodent	102.1
South Central Section				
Geo. Steen	West Liberty	Muscatine	Steen's Y. D.	103.0
Southern Section				
C. D. Kirkpatrick	Keota	Keokuk	Walden Dent	103.0
SIX YEARS 1922—1927				
Northern Section				
No Entries				
North Central Section				
H. F. Osterland	Faulkner	Franklin	Osterland's Y. D.	101.6
South Central Section				
Geo. Steen	West Liberty	Muscatine	Steen's Y. D.	103.1
Southern Section				
C. D. Kirkpatrick	Keota	Keokuk	Walden Dent	104.0
FIVE YEARS 1923—1927				
Northern Section				
Wm. McArthur	Mason City	Cerro Gordo	Golden King	107.5
North Central Section				
H. F. Osterland	Faulkner	Franklin	Osterland's Y. D.	101.1
South Central Section				
Geo. Steen	West Liberty	Muscatine	Steen's Y. D.	103.6
Southern Section				
C. D. Kirkpatrick	Keota	Keokuk	Walden Dent	105.6

FOUR YEARS 1924—1927

Northern Section

Wm. McArthur	Mason City	Cerro Gordo	Golden King	107.8

North Central Section

R. J. Clampitt	New Providence	Hardin	Reid's Y. D.	103.8
H. F. Osterland	Faulkner	Franklin	Osterland's Y. D.	100.0

South Central Section

Clarence S. Hill	Minburn	Dallas	Black's Y. D.	104.0
A. Wilson	Harlan	Shelby	Wilson High Yield Y. D.	102.7

Southern Section

C. D. Kirkpatrick	Keota	Keokuk	Walden Dent	105.0

THREE YEARS 1925—1927

Northern Section

Wm. McArthur	Mason City	Cerro Gordo	Golden King	106.8

North Central Section

R. J. Clampitt	New Providence	Hardin	Reid's Y. D.	102.7
Edwin H. Witter	Storm Lake	Buena Vista	Witter's Wh. Dent	99.8

South Central Section

McNeilly & Smith	Center Jct.	Jones	Ioleaming	113.4
Clarence S. Hill	Minburn	Dallas	Black's Y. D.	108.3
Fred McCulloch	Hartwick	Iowa	McCulloch High Yield	108.2

Southern Section

E. S. Dyas & Sons	Bellevue	Jackson	Reid's Y. D.	104.6
C. D. Kirkpatrick	Keota	Keokuk	Walden Dent	103.1

TWO YEARS 1926—1927

Northern Section

Wm. McArthur	Mason City	Cerro Gordo	Golden King	106.5

North Central Section

Smith Bros.	Center Jct.	Jones	Ioleaming	106.8
R. J. Clampitt	New Providence	Hardin	Reid's Y. D.	101.6

South Central Section

McNeilly & Smith	Center Jct.	Jones	Ioleaming	112.8
Lester Pfister	El Paso, Ill.	Woodford	Pfister's Krug	110.2
G. V. Harkrader	Adel	Dallas	Harkrader Y. D.	105.9
Fred McCulloch	Hartwick	Iowa	McCulloch High Yield	103.6

Southern Section

C. D. Kirkpatrick	Keota	Keokuk	Walden Dent	106.8
E. S. Dyas & Sons	Bellevue	Jackson	Reid's Y. D.	104.2
Geo. Steen	West Liberty	Muscatine	Steen's Y. D.	101.8

SEED TREATMENTS

Experiments were conducted in connection with the yield tests in districts 2, 5, 7 and 10 to determine the value of four different trial dusts for treating seed corn for disease. In each of the four counties where these test fields were located, a composite was made with seed obtained from 12 different farmers to represent average seed not specially selected. From each of the four composite lots of seed five plantings were made, the first of which was treated with trial dust No. 1, the second with trial dust No. 2, the fourth with trial dust No. 3, and the fifth with trial dust No. 4. The third planting was with seed not treated. Each row was planted with the same number of seeds from each of the 12 different farmers.

Four different lots of seed, entered regularly in the yield test by different growers, were each divided into five portions and given the same treatments as the composite lots. These were planted in the same four districts as the composite lots.

These experiments were conducted with the co-operation of the Botany and Plant Pathology section, Iowa State College.

The results obtained are shown in Table VII where the acre yields in bushels are given for each trial dust and the untreated, or check seed, in each district, and the average yield for all the districts. No significant differences in yield between treated and untreated composite seed were obtained. Seed treatment did result in increased yields when used with the four regular entries in the yield test, however; increases ranging from .74 to 4.37 bushels were obtained, each of the treated samples yielding higher than the untreated lots. The greatest average increase, was obtained with trial dust No. 2. The sample treated with this dust yielded highest in three of the four fields.

TABLE VII. ACRE YIELDS IN BUSHELS OBTAINED FROM UNSELECTED AND SPECIALLY SELECTED SEED UNTREATED AND FROM SAMPLES OF THE SAME SEED TREATED WITH FOUR DIFFERENT TRIAL DUSTS

Kind of Treatment	Acre yields in bushels				
	Dist. 2	Dist. 5	Dist. 7	Dist 10	Average
Composite seed					
Trial dust No. 1	33.59	44.03	50.86	46.74	43.81
Trial dust No. 2	33.23	51.10	49.91	45.34	44.90
Not treated	31.56	47.18	52.71	46.52	44.49
Trial dust No. 3	31.43	47.81	51.24	44.64	43.78
Trial dust No. 4	33.91	47.04	51.37	44.10	44.11
Selected seed					
Trial dust No. 1	37.59	42.42	51.82	52.96	46.20
Trial dust No. 2	39.94	43.26	50.80	59.95	48.49
Not treated	36.70	40.67	47.18	51.94	44.12
Trial dust No. 3	35.56	42.14	54.23	52.50	46.11
Trial dust No. 4	35.43	40.57	54.10	49.34	44.86

PLAN FOR 1928

(1) The state has been divided into 12 districts as indicated by the map. Entries may be made in one or more of the 12 districts.

(2) A class is provided for hybrids of inbred strains. Hybrids of non-inbred varieties and strains, will be included in the open-pollinated class. The two classes will not compete with each other for premiums. Hybrids involving one or more inbred strains will be entered in the hybrid class.

(3) All entries in any one district will be grown side by side a sufficient number of times to insure a fair comparison.

(4) A number will be assigned each sample when received by the Secretary of the Iowa Corn and Small Grain Growers' Association. The name of the competitor will not be used or known until the final yields have been computed.

(5) All yields will be based on sound, shelled corn with a uniform moisture content.

(6) The Association is leaving the question of seed treatment for entries in the 1928 test optional with the entrant.

shown on map (fig. 1). Dividing the state in this way makes it possible to compare the smaller, earlier maturing strains of northern Iowa with one another under conditions suitable to them. Likewise, the larger, later maturing strains grown further south are compared under conditions to which they are adapted.

Two Classes of Entries

Hybrids from inbred strains of corn have been entered in the test since 1923. These hybrids have outyielded the ordinary open-pollinated strains rather consistently. Generally, seed of these hybrids has not been available for distribution. Furthermore, exactly the same hybrid has seldom, if ever, been entered more than one year. It seemed unfair, therefore, to make into four sections, northern, north central, south central and southern. Each section was subdivided into three districts which

Fig. 2. The above ears are representative of the entry which made the outstanding yield in the hybrid class.

strains involving no inbreeding compete with hybrids from inbred lines. Accordingly, beginning with the 1926 test, the strains have been divided into two classes, **open-pollinated** for those strains produced without inbreeding and **hybrid** for those strains whose production involved one or more inbred lines. The term inbreeding as here used, assumes completely controlled pollination.

The yields of strains in the two classes are entirely comparable, however, since they are grown side by side in the same field. The purpose of the classification primarily is for use in awarding premiums.

HOW TO MAKE ENTRY

(1) An entry fee of $3.00 for each sample entered in each district will be charged for samples grown in Iowa. A charge of $10.00 for each entry in each district will be made for samples from outside the state. The entry fee must accompany the entry.

(2) Applications for entry together with entry fee should be mailed immediately to the Iowa Corn and Small Grain Growers' Association at Ames, Iowa.

(3) A competitor may make as many entries in any one district as he desires, providing real differences exist between the entries.

(4) For each sample entered the competitor must supply, free of charge, four pounds of high germinating shelled corn ready to plant. This seed becomes the property of the Iowa Corn and Small Grain Growers' Association.

(5) Each sample must be labeled distinctly and entered under the name and address of the grower. The variety name of the corn if known, and the district of the state in which it is to compete must be given.

(6) Corn should be shipped in heavy bags or strong containers to insure its reaching the Association in good condition.

(7) Entries close May 1st, 1928. The entry blank, entry fee and four pounds of seed corn must be in the hands of the association by that time.

PREMIUMS FOR 1928 TEST

(1) The Banner Trophy is awarded annually by Raymond A. Pearson, ex-president of Iowa State College, to the Iowa grower whose entry produces the highest per cent above the average yield of all entries in its class in the three districts of any section. In other words, the high yielding entry of the hybrid class competes for the banner trophy with the high yielding entry of the other class. To win the trophy the entry must be the same kind of corn in all three districts of the section.

(2) A gold medal will be awarded to the entrant in each class in each section whose corn gives the highest per cent yield above the average of all samples of that class included in the district in which the entry was made. All samples included in a section are eligible to compete for the gold medal whether included in one, two or three districts. The yield made in a single district in comparison with the average yield of the class will be the basis of award.

(3) In each district the Association will award a bronze medal for the highest yielding corn in each class entered by a grower residing in that district where the test is made.

(4) A certificate will be awarded to the highest yielding section entry in each class in the four sections of the state.

(5) The top one-third of both classes in each district will receive suitable ribbons from the Association.

(6) Geo. M. Allee, of Newell, Iowa, past president of the Association, is offering the following cash premiums for entries made by residents of the district in which the entry is made.

A. $3.00 for second highest yielding entry.
B. $2.00 for third highest yielding entry.
C. $2.00 for fourth highest yielding entry.
D. $1.00 for fifth highest yielding entry.

Entries in the hybrid class, and entries made by the United States Department of Agriculture, the Iowa State College, and Mr. Allee are not eligible for the above cash premiums.

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1. Geo. W. Smith, Paullina
2. A. B. Schenck, Algona
3. Theo. Gronna, Waterville
4. Fred N. Rupp, Cherokee
5. H. F. Osterland, Faulkner
6. B. S. Strayer, Hudson
7. Frank Trucks, Coon Rapids
8. Marion Coppoch, Ankeny
9. Fred McCulloch, Hartwick
10. O. D. Stone, Elliott
11. H. R. Richards, Swan
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THE BOARD OF DIRECTORS

Consists of the above named officers of the Association and the following ex-presidents:

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W. E. Krizer, Eddyville
Geo. M. Allee, Newell
I. E. Proudfit, Altoona

APPLICATION FOR ENTRY

In the 1928 Corn Yield Test no entry will be accepted unless this form is filled out fully and completely. **Write carefully.**

I hereby make application for entry in the Yield Test of the Iowa Corn and Small Grain Growers' Association and agree to ship, prepaid, four pounds of high germinating shelled seed corn to the Association before May 1, 1928. I am the grower of this seed, and agree to abide by the provisions of the contest. **My entry fee is enclosed.** (Entry fee, corn grown in Iowa $3.00, corn from out of the state, $10.00.)

District in which corn is to compete.....

Have you entered this corn before?.....What year?.....

In what year was this seed produced?.....

Variety or strain name.....

Is this a hybrid involving an inbred?.....

If so, indicate the parent strains.....

.....

In what county and state was your entry grown?.....

From whom did you obtain your first seed?.....

.....

How long have you produced this variety or strain?.....

Name .....

Post Office.....Rural Route.....

State .....

All applications should be mailed to the

SECRETARY, IOWA CORN AND SMALL GRAIN GROWERS' ASSOCIATION
Ames, Iowa

Fig. 8. The above ears are representative of the entry which made the outstanding yield in the open-pollinated class.

Distribution of Entries

There were 537 entries in the 1927 test—more than in any previous year. Of these 499 were made by Iowa growers. Entries received from outside the state were as follows: Illinois, 26; U. S. Department of Agriculture, 12. Table I gives the distribution of entries by classes and districts.

TABLE I. DISTRIBUTION OF THE 537 DISTRICT ENTRIES

Dist. No.	Rate Planted	Open pollinated	Hybrid	Total Entries	Location of Field	
1	4	21	11	32	Everly	Clay Co.
2	4	30	7	37	Mason City	Cerro Gordo Co.
3	4	13	6	19	New Hampton	Chickasaw Co.
4	3	31	12	43	Storm Lake	Buena Vista Co.
5	3	34	9	43	Goldfield	Wright Co.
6	3	17	7	24	Manchester	Delaware Co.
7	3	38	43	81	Carroll	Carroll Co.
8	3	42	71	113	Ames	Story Co.
9	3	29	22	51	Monticello	Jones Co.
10	3	32	5	37	Henderson	Mills Co.
11	3	21	6	27	Knoxville	Marion Co.
12	3	23	7	30	Mt. Pleasant	Henry Co.

Of the entries included in Table I 219 constitute 73 section entries. A section entry consists of three district entries of the same strain of corn by one individual in any one of the four sections of the state. The distribution of the section entries is shown in Table II.

TABLE II. DISTRIBUTION OF SECTION ENTRIES

Section	Districts Included	No. Section Entries		
		Open pollinated	Hybrid	Total
Northern	1– 2– 3	6	6	12
North Central	4– 5– 6	11	7	18
South Central	7– 8– 9	15	12	27
Southern	10–11–12	11	5	16
Total		43	30	73

Identification of Entries

Each entry was given a number by which it was known throughout the season. The records of these numbers with the corresponding names and addresses of their owners were sealed and placed in the Union National Bank at Ames immediately after planting and were not opened again until after the tabulation of results was completed.

Arrangement of the Plats

The plats in nine of the fields consisted of three rows each 25 hills long. The plats in the other three fields consisted of four rows each 12 hills long. The two outside rows of each plat were used as borders to prevent any possible increase or decrease in yield of the strain due to its being grown adjacent to another strain or variety which might differ materially in vigor of growth or in maturity. Data obtained in previous years indicate that such border effect usually is not important except where differences in stand occur. It has not yet been practicable to insure uniform stands.

Each entry was planted in ten plats systematically distributed over the test field. The rate of planting, as shown in Table I, was four kernels per hill in all the fields of the northern section and three kernels per hill in all the other sections. Each plat was planted by hand in order to insure a uniform number of kernels in each hill. No thinning was done.

FACTORS AFFECTING YIELD

Many factors affect the yield of a strain of corn in a comparison such as this. Some of these are more apparent than others. Mention is made of three of those most important. Stand, maturity and weight of ear, are discussed briefly.

Stand

It is highly desirable that the seed of every entry in the test have the quality of vigorous germination. A high percentage stand with little variation among the different entries is essential to a correct evaluation of the relative yielding capacity of the strains. Corrections have been made for missing hills. As missing hills may be due largely to mechanical factors and not to poor seed, it seems justifiable to make such corrections.